

NA

(1643)

BATCH

1-12

PAGE: 1

RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/323,597DATE: 02/01/2000  
TIME: 17:11:34

Input Set: I323597.RAW

This Raw Listing contains the General Information  
Section and up to first 5 pages.

ENTERED

P.S

1 <110> APPLICANT: Afar, Daniel E  
2 Hubert, Rene S  
3 Leong, Kahan  
4 Raitano, Arthur B.  
5 Saffran, Douglas C.  
6 <120> TITLE OF INVENTION: NOVEL TUMOR ANTIGEN USEFUL IN DIAGNOSIS AND THERAPY OF  
7 PROSTATE AND COLON CANCER  
8 <130> FILE REFERENCE: 1703-007.US1  
9 <140> CURRENT APPLICATION NUMBER: US/09/323,597  
10 <141> CURRENT FILING DATE: 1999-06-01  
11 <150> EARLIER APPLICATION NUMBER: 60/087,598  
12 <151> EARLIER FILING DATE: 1998-06-01  
13 <150> EARLIER APPLICATION NUMBER: 60/091,474  
14 <151> EARLIER FILING DATE: 1998-06-29  
15 <150> EARLIER APPLICATION NUMBER: 60/129,521  
16 <151> EARLIER FILING DATE: 1999-04-14  
17 <160> NUMBER OF SEQ ID NOS: 13  
18 <170> SOFTWARE: PatentIn Ver. 2.0  
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20 <211> LENGTH: 1738  
21 <212> TYPE: DNA  
22 <213> ORGANISM: Homo sapiens  
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26 aactcagggt caccaccagc tattggacct tactatgaaa accatggata ccaaccggaa 180  
27 aaccctatc ccgcacagcc cactgtgtgc cccactgtct acgaggtgca tccggctcag 240  
28 tactaccgt ccccggtgcc ccagtagcc cggagggtcc tgacgcaggc ttccaacccc 300  
29 gtcgtctgca cgcagcccaa atccccatcc gggacagtgt gcacctcaaa gactaagaaa 360  
30 gcactgtgca tcaccttgac cctggggacc ttctctgtgg gagctgcgct ggccgctggc 420  
31 ctactctgga agttcatggg cagcaagtgc tccaactctg ggatagagtg cgactcctca 480  
32 ggtacctgca tcaacccctc taactggtgt gatggcgtgt cactactgcc cggcggggag 540  
33 gacgagaatc ggtgtgttcg cctctacgga ccaaacttca tccttcagggt gtactcatct 600  
34 cagaggaagt cctggcaccc tgtgtgccaa gacgactgga acgagaacta cgggcggggc 660  
35 gctgtcaggg acatgggcta taagaataat ttttactcta gccaaaggaat agtggatgac 720  
36 agcggatcca ccagctttat gaaactgaac acaagtgccg gcaatgtcga tatctataaa 780  
37 aaactgtacc acagtgatgc ctgttcttca aaagcagtgg tttctttacg ctgtatagcc 840  
38 tgcgggggtca acttgaactc aagccgccag agcaggattg tgggcgggca gagcgcgctc 900  
39 ccggggggcct ggccctggca ggtcagcctg cagtcacaga acgtccacgt gtgcggaggc 960  
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41 aatccatggc attggacggc atttgccggg attttgagac aatctttcat gttctatgga 1080  
42 gccggatacc aagtagaaaa agtgatttct catccaaatt atgactccaa gaccaagaac 1140  
43 aatgacattg cgctgatgaa gctgcagaag cctctgactt tcaacgacct agtgaaacca 1200  
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Input Set: I323597.RAW

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 48 cctctgggtca cttcgaagaa caatatctgg tggctgatag gggatacaag ctgggggttct 1500  
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 51 tacaagaaaa caatggggct ggttttgcct ccccgatgcat gatttactct tagagatgat 1680  
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53 &lt;210&gt; SEQ ID NO 2

54 &lt;211&gt; LENGTH: 491

55 &lt;212&gt; TYPE: PRT

56 &lt;213&gt; ORGANISM: Homo sapiens

57 &lt;400&gt; SEQUENCE: 2

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 59 1 5 10 15  
 60 Asn His Gly Tyr Gln Pro Glu Asn Pro Tyr Pro Ala Gln Pro Thr Val  
 61 20 25 30  
 62 Val Pro Thr Val Tyr Glu Val His Pro Ala Gln Tyr Tyr Pro Ser Pro  
 63 35 40 45  
 64 Val Pro Gln Tyr Ala Pro Arg Val Leu Thr Gln Ala Ser Asn Pro Val  
 65 50 55 60  
 66 Val Cys Thr Gln Pro Lys Ser Pro Ser Gly Thr Val Cys Thr Ser Lys  
 67 65 70 75 80  
 68 Thr Lys Lys Ala Leu Cys Ile Thr Leu Thr Leu Gly Thr Phe Leu Val  
 69 85 90 95  
 70 Gly Ala Ala Leu Ala Ala Gly Leu Leu Trp Lys Phe Met Gly Ser Lys  
 71 100 105 110  
 72 Cys Ser Asn Ser Gly Ile Glu Cys Asp Ser Ser Gly Thr Cys Ile Asn  
 73 115 120 125  
 74 Pro Ser Asn Trp Cys Asp Gly Val Ser His Cys Pro Gly Gly Glu Asp  
 75 130 135 140  
 76 Glu Asn Arg Cys Val Arg Leu Tyr Gly Pro Asn Phe Ile Leu Gln Val  
 77 145 150 155 160  
 78 Tyr Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp  
 79 165 170 175  
 80 Asn Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn  
 81 180 185 190  
 82 Asn Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser  
 83 195 200 205  
 84 Phe Met Lys Leu Asn Thr Ser Ala Gly Asn Val Asp Ile Tyr Lys Lys  
 85 210 215 220  
 86 Tyr His Ser Asp Ala Cys Ser Ser Lys Ala Val Val Ser Leu Arg Cys  
 87 225 230 235 240  
 88 Ile Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile Val  
 89 245 250 255  
 90 Gly Gly Glu Ser Ala Leu Pro Gly Ala Trp Pro Trp Gln Val Ser Leu  
 91 260 265 270  
 92 His Val Gln Asn Val His Val Cys Gly Gly Ser Ile Ile Thr Pro Glu  
 93 275 280 285  
 94 Trp Ile Val Thr Ala Ala His Cys Val Glu Lys Pro Leu Asn Asn Pro

## BATCH

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/323,597DATE: 02/01/2000  
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Input Set: I323597.RAW

95	290	295	300
96	Trp His Trp Thr Ala Phe Ala Gly Ile Leu Arg Gln Ser Phe Met Phe		
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98	Tyr Gly Ala Gly Tyr Gln Val Glu Lys Val Ile Ser His Pro Asn Tyr		
99	325	330	335
100	Asp Ser Lys Thr Lys Asn Asn Asp Ile Ala Leu Met Lys Leu Gln Lys		
101	340	345	350
102	Pro Leu Thr Phe Asn Asp Leu Val Lys Pro Val Cys Leu Pro Asn Pro		
103	355	360	365
104	Gly Met Met Leu Gln Pro Glu Gln Leu Cys Trp Ile Ser Gly Trp Gly		
105	370	375	380
106	Ala Thr Glu Glu Lys Gly Lys Thr Ser Glu Val Leu Asn Ala Ala Lys		
107	385	390	395 400
108	Val Leu Leu Ile Glu Thr Gln Arg Cys Asn Ser Arg Tyr Val Tyr Asp		
109	405	410	415
110	Asn Leu Ile Thr Pro Ala Met Ile Cys Ala Gly Phe Leu Gln Gly Asn		
111	420	425	430
112	Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Thr Ser Lys		
113	435	440	445
114	Asn Asn Ile Trp Trp Leu Ile Gly Asp Thr Ser Trp Gly Ser Gly Cys		
115	450	455	460
116	Ala Lys Ala Tyr Arg Pro Gly Val Tyr Gly Asn Val Met Val Phe Thr		
117	465	470	475 480
118	Asp Trp Ile Tyr Arg Gln Met Arg Ala Asp Gly		
119	485	490	

120 &lt;210&gt; SEQ ID NO 3

121 &lt;211&gt; LENGTH: 2479

122 &lt;212&gt; TYPE: DNA

123 &lt;213&gt; ORGANISM: Homo sapiens

124 &lt;300&gt; PUBLICATION INFORMATION:

125 &lt;303&gt; JOURNAL: Genomics

126 &lt;304&gt; VOLUME: 44

127 &lt;306&gt; PAGES: 309-320

128 &lt;307&gt; DATE: 1997

129 &lt;400&gt; SEQUENCE: 3

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132	cggaaaaccc ctatcccgca cagcccactg tggccccac tgtctacgag gtgcatccgg 180
133	ctcagtacta cccgtcccc gtgccccagt acgccccgag ggtcctgacg caggcttcca 240
134	accccgctgt ctgcacgcag cccaaatccc catccgggac agtgtgcacc tcaaagacta 300
135	agaaagcact gtgcatcacc ttgaccctgg ggaccttcct cgtgggagct gcgctggccg 360
136	ctggcctact ctggaagttc atgggcagca agtgctccaa ctctgggata gagtgcgact 420
137	cctcaggtac ctgcatcaac ccctctaact ggtgtgatgg cgtgtcacac tgccccggcg 480
138	gggaggacga gaatcgggtg gttegcctct acggaccaa cttcatcctt cagatgtact 540
139	catctcagag gaatccttg caccctgtgt gccaaagacga ctggaacgag aactacgggc 600
140	gggcggcctg cagggacatg ggctataaga ataattttta ctctagccaa ggaatagtgg 660
141	atgacagcgg atccaccagc tttatgaaac tgaacacaag tgccggcaat gtcgatatct 720
142	ataaaaaact gtaccacagt gatgcctgtt cttcaaaagc agtggtttct ttacgctgtt 780
143	tagcctgcgg ggtcaacttg aactcaagcc gccagagcag gatcggtggc ggtgagagcg 840
144	cgctcccggg ggctggccc tggcaggtca gcctgcacgt ccagaacgtc cacgtgtgcy 900

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# RAW SEQUENCE LISTING PATENT APPLICATION US/09/323,597

DATE: 02/01/2000  
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Input Set: I323597.RAW

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147 atggagccgg ataccaagta caaaaagtga tttctcatcc aaattatgac tccaagacca 1080
148 agaacaatga cattgcgctg atgaagctgc agaagcctct gactttcaac gacctagtga 1140
149 aaccagtgtg tctgcccac ccaggcatga tgctgcagcc agaacagctc tgctggattt 1200
150 ccgggtgggg ggccaccgag gagaaagggg agacctcaga agtgcgaac gctgccaagg 1260
151 tgcttctcat tgagacacag agatgcaaca gcagatatgt ctatgacaac ctgatcacac 1320
152 cagccatgat ctgtgccggc ttcctgcagg ggaacgtcga ttcttgccag ggtgacagtg 1380
153 gagggcctct ggtcacttcg aacaacaata tctggtggct gataggggat acaagctggg 1440
154 gttctggctg tgccaaagct tacagaccag gagtgtacgg gaatgtgatg gtattcacgg 1500
155 actggattta tcgacaaatg aaggcaaacg gctaattccac atggtcttcg tccttgacgt 1560
156 cgttttacaa gaaaacaatg gggctggttt tgcttccccg tgcattgatt actcttagag 1620
157 atgattcaga ggtcacttca tttttattaa acagtgaact tgtctggctt tggcactctc 1680
158 tgccatactg tgcaggtcgc agtggctccc ctgccagcc tgctctccct aacccttgt 1740
159 ccgcaagggg tgatggccgg ctggttgtgg gcactggcgg tcaattgtgg aaggaagagg 1800
160 gttggaggct gccccattg agatcttcct gctgagtcct ttccaggggc caattttgga 1860
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162 ggaaagggag acagccaggt ggcacctgca gcggctgcc tctggggcca cttagtagtg 1980
163 tccccagcct acttcacaag gggattttgc tgatgggttc ttagagcctt agcagccctg 2040
164 gatggtggcc agaaataaag ggaccagccc ttcatgggtg gtgacgtggt agtcacttgt 2100
165 aaggggaaca gaaacatttt tgttcttatg gggtgagaat atagacagtg cccttggtgc 2160
166 gaggggaagca attgaaaagg aacttgcctt gacactcctt ggtgcaggtc tccacctgca 2220
167 cattgggtgg ggctcctggg agggagactc agccttcctc ctcactctcc ctgaccctgc 2280
168 tcctagcacc ctggagagtg aatgccccct ggtccctggc agggcgccaa gtttggcacc 2340
169 atgtcggcct cttcaggcct gatagtcatt ggaaattgag gtccatgggg gaaatcaagg 2400
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172 <210> SEQ ID NO 4
173 <211> LENGTH: 492
174 <212> TYPE: PRT
175 <213> ORGANISM: Homo sapiens
176 <300> PUBLICATION INFORMATION:
177 <303> JOURNAL: Genomics
178 <304> VOLUME: 44
179 <306> PAGES: 309-320
180 <307> DATE: 1997
181 <400> SEQUENCE: 4

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185      20              25              30
186 Val Pro Thr Val Tyr Glu Val His Pro Ala Gln Tyr Tyr Pro Ser Pro
187      35              40              45
188 Val Pro Gln Tyr Ala Pro Arg Val Leu Thr Gln Ala Ser Asn Pro Val
189      50              55              60
190 Val Cys Thr Gln Pro Lys Ser Pro Ser Gly Thr Val Cys Thr Ser Lys
191      65              70              75              80
192 Thr Lys Lys Ala Leu Cys Ile Thr Leu Thr Leu Gly Thr Phe Leu Val
193      85              90              95
194 Gly Ala Ala Leu Ala Ala Gly Leu Leu Trp Lys Phe Met Gly Ser Lys

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/323,597DATE: 02/01/2000  
TIME: 17:11:34

Input Set: I323597.RAW

195		100		105		110	
196	Cys Ser Asn Ser Gly Ile Glu Cys Asp Ser Ser Gly Thr Cys Ile Asn						
197		115		120		125	
198	Pro Ser Asn Trp Cys Asp Gly Val Ser His Cys Pro Gly Gly Glu Asp						
199		130		135		140	
200	Glu Asn Arg Cys Val Arg Leu Tyr Gly Pro Asn Phe Ile Leu Gln Met						
201	145		150		155		160
202	Tyr Ser Ser Gln Arg Lys Ser Trp His Pro Val Cys Gln Asp Asp Trp						
203		165		170		175	
204	Asn Glu Asn Tyr Gly Arg Ala Ala Cys Arg Asp Met Gly Tyr Lys Asn						
205		180		185		190	
206	Asn Phe Tyr Ser Ser Gln Gly Ile Val Asp Asp Ser Gly Ser Thr Ser						
207		195		200		205	
208	Phe Met Lys Leu Asn Thr Ser Ala Gly Asn Val Asp Ile Tyr Lys Lys						
209		210		215		220	
210	Leu Tyr His Ser Asp Ala Cys Ser Ser Lys Ala Val Val Ser Leu Arg						
211	225		230		235		240
212	Cys Leu Ala Cys Gly Val Asn Leu Asn Ser Ser Arg Gln Ser Arg Ile						
213		245		250		255	
214	Val Gly Gly Glu Ser Ala Leu Pro Gly Ala Trp Pro Trp Gln Val Ser						
215		260		265		270	
216	Leu His Val Gln Asn Val His Val Cys Gly Gly Ser Ile Ile Thr Pro						
217		275		280		285	
218	Glu Trp Ile Val Thr Ala Ala His Cys Val Glu Lys Pro Leu Asn Asn						
219		290		295		300	
220	Pro Trp His Trp Thr Ala Phe Ala Gly Ile Leu Arg Gln Ser Phe Met						
221	305		310		315		320
222	Phe Tyr Gly Ala Gly Tyr Gln Val Gln Lys Val Ile Ser His Pro Asn						
223		325		330		335	
224	Tyr Asp Ser Lys Thr Lys Asn Asn Asp Ile Ala Leu Met Lys Leu Gln						
225		340		345		350	
226	Lys Pro Leu Thr Phe Asn Asp Leu Val Lys Pro Val Cys Leu Pro Asn						
227		355		360		365	
228	Pro Gly Met Met Leu Gln Pro Glu Gln Leu Cys Trp Ile Ser Gly Trp						
229		370		375		380	
230	Gly Ala Thr Glu Glu Lys Gly Lys Thr Ser Glu Val Leu Asn Ala Ala						
231	385		390		395		400
232	Lys Val Leu Leu Ile Glu Thr Gln Arg Cys Asn Ser Arg Tyr Val Tyr						
233		405		410		415	
234	Asp Asn Leu Ile Thr Pro Ala Met Ile Cys Ala Gly Phe Leu Gln Gly						
235		420		425		430	
236	Asn Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Thr Ser						
237		435		440		445	
238	Asn Asn Asn Ile Trp Trp Leu Ile Gly Asp Thr Ser Trp Gly Ser Gly						
239		450		455		460	
240	Cys Ala Lys Ala Tyr Arg Pro Gly Val Tyr Gly Asn Val Met Val Phe						
241	465		470		475		480
242	Thr Asp Trp Ile Tyr Arg Gln Met Lys Ala Asn Gly						
243		485		490			

**Please Note:**

&lt;210&gt; SEQ ID NO 5

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

PAGE: 6

VERIFICATION SUMMARY  
PATENT APPLICATION US/09/323,597

DATE: 02/01/2000  
TIME: 17:11:34

Input Set: I323597.RAW

Line	? Error/Warning	Original Text
252	W "N" or "Xaa" used: Feature required	aggggatttt gctgatgggt tcttanagcc ttagcagc
253	W "N" or "Xaa" used: Feature required	agggaccagc ccttcattggg tggtagcgtg gtantcac